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Zoltan Horvath

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EXAMINER

YANG, QIAN

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

03/24/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

Office Action Summary	Application No. 10/591,402	Applicant(s) HORVATH ET AL.	
	Examiner QIAN YANG	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on February 5, 2010 has been entered. Claims 1 – 14 have been amended. No claims have been canceled. Claims 15 – 20 have been added. Claims 1 - 20 are still pending in this application, with claims 1, 11 and 15 being independent.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the phrase “the optical recording means” (last line) is lack of antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 7, 9, and 11 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alderton (US Patent 3,635,557) in view of Bock (US Patent 5,012,275).

Art Unit: 2625

Regarding claim 1, Alderton discloses a method for imaging a primarily two-dimensional target (T) (**method for photographically copying book pages**), comprising:

matching at least one optical unit (**#14 mirror and side #16 of the prism #12 in**

Figure) adapted for influencing the direction of rays of light falling onto the target (T);

illuminating (**#17 in Figure, col. 2, lines 55 – 60**) the target (T) while directing a means for recording optics to the optical unit;

mapping the pixels of the target (T) reaching the means for recording optics through the optical unit by projecting rays originating from pixels of the target (T) at right angles to the target (T) through the optical unit to a means for sensing of the means for recording optics in the whole range of the optical angle of the means for recording optics (**col. 2, line 67 to col. 3, line 6**); and

displacing the means for recording optics (**#28 in Figure**) in a receding manner from a plane of the target (T).

However, Alderton fails to explicitly disclose wherein the method wherein turning away the means for recording optics at a predetermined angle α in a curved course compared to an optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle $\alpha/2$ of the optical recording means.

However, in a similar field of endeavor Bock discloses a method for copying bound books. In addition, Bock discloses the method wherein turning away the means for recording optics at a predetermined angle α in a curved course compared to an optical axis (OA) originating from a centre of the target (T) while tilting the optical unit

Art Unit: 2625

half to an extent of said displacement with an angle $\alpha/2$ of the optical recording means **(col. 3, lines 31 -35)**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for the means for recording optics and mirror, as taught by Bock. The motivation for doing this is that to allow the book binding area to be more fully illuminated, as discussed by Bock **(col. 3, lines 26 – 29)**.

Regarding claim 2 (depends on claim 1), Alderton discloses the method further comprising pressing down the surface of the target (T) to gain a flat surface for mapping **(#18 and 30 in Figure)**.

Regarding claim 3 (depends on claim 1), Bock discloses the method further comprising choosing the value of the angle α exceeding at least the half of the optical angle of the means for recording optics **(From Fig. 4 of current invention, the half of the optical angle of the optical recording means is about 10 degree. Bock discloses the rotating angle θ can exceed 10 degree in the book binding area)**.

Regarding claim 4 (depends on claim 1), Alderton discloses the method further comprising using a mirror (M) as the optical unit **(#14 mirror in Figure)**.

Regarding claim 5 (depends on claim 4), Alderton discloses the method further comprising using a surface mirror (M) (**#14 mirror in Figure**).

Regarding claim 6 (depends on claim 1), Alderton discloses the method further comprising using a wedge shaped optical element composed of a pressing-down glass plate (G) and a surface mirror (M) (**#14 mirror and the glass prism #12 in Figure**).

Regarding claim 7 (depends on claim 6), Bock discloses the method further comprising using an optical element with an adjustable front rake (**col. 3, lines 26 – 29**).

Regarding claim 9 (depends on claim 1), Alderton discloses the method further comprising applying a light source (L) providing homogenous diffused light (**#17 in Figure, col. 2, lines 55 – 60**).

Regarding claim 11, Alderton discloses an arrangement for imaging a primarily two-dimensional target (T), comprising:
at least one optical unit adapted for influencing the direction of rays of light falling onto it (**#14 mirror and side #16 of the prism #12 in Figure**);
a light source (L) illuminating the target (T) (**#17 in Figure, col. 2, lines 55 – 60**); and
a means for recording optics (**#28 in Figure**) directed to the optical unit while being directed to the optical unit (**col. 2, line 67 to col. 3, line 6**) the means for recording

Art Unit: 2625

optics is displaced in a receding manner from the plane of the target (T) (#28 in Figure), and originally running at an angle of 45° to the surface of the target (T) (**the angle between #28 and #20 in the Figure is 45 degree**).

However, Alderton fails to explicitly disclose wherein the means for recording optics is turned away at a predetermined angle α in a curved course compared to the optical axis (OA) originating from the centre of the target (T), while the optical unit is tilted to an extent which is increased by a half of the displacement angle with an angle $\alpha/2$ of the optical recording means.

However, in a similar field of endeavor Bock discloses a system for copying bound books. In addition, Bock discloses the means for recording optics is turned away at a predetermined angle α in a curved course compared to the optical axis (OA) originating from the centre of the target (T), while the optical unit is tilted to an extent which is increased by a half of the displacement angle with an angle $\alpha/2$ of the optical recording means (**col. 3, lines 31 – 35**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for optical recording means and mirror, as taught by Bock. The motivation for doing this is that to allow the book binding area to be more fully illuminated, as discussed by Bock (**col. 3, lines 26 – 29**).

Regarding claim 12 (depends on claim 2), Alderton discloses the method further comprising choosing the value of the angle α exceeding at least the half of the optical

Art Unit: 2625

angle of the optical recording means (**From Fig. 4 of current invention, the half of the optical angle of the optical recording means is about 10 degree. Bock discloses the rotating angle θ can exceed 10 degree in the book binding area**).

Regarding claim 13 (depends on claim 2), Alderton discloses the method further comprising using a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 14 (depends on claim 3), Alderton discloses the method further comprising using a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 15, Alderton discloses a method for imaging a primarily two-dimensional target (T), comprising:

matching at least one optical unit adapted for influencing the direction of rays of light falling onto the target (T) (**#14 mirror and side #16 of the prism #12 in Figure**);

illuminating the target (T) while directing an optical recording device to the optical unit (**#17 in Figure, col. 2, lines 55 – 60**);

mapping the pixels of the target (T) reaching the optical recording device through the optical unit by projecting rays originating from pixels of the target (T) at right angles to the target (T) through the optical unit to a sensor of the optical recording device in the whole range of the optical angle of the optical recording device (**col. 2, line 67 to col. 3, line 6**); and

Art Unit: 2625

displacing the optical recording device (**#28 in Figure**) in a receding manner from a plane of the target (T).

However, Alderton fails to explicitly disclose wherein the method wherein turning away the optical recording device at a predetermined angle α in a curved course compared to the optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle $\alpha/2$ of the optical recording device.

However, in a similar field of endeavor Bock discloses a method for copying bound books. In addition, Bock discloses the method wherein turning away the optical recording device at a predetermined angle α in a curved course compared to the optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle $\alpha/2$ of the optical recording device (**col. 3, lines 31 – 35**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for the means for recording optics and mirror, as taught by Bock. The motivation for doing this is that to allow the book binding area to be more fully illuminated, as discussed by Bock (**col. 3, lines 26 – 29**).

Regarding claim 16 (depends on claim 15), Alderton discloses the method further comprising pressing down the surface of the target (T) to gain a flat surface for mapping (**#18 and 30 in Figure**).

Regarding claim 17 (depends on claim 15), Bock discloses the method further comprising choosing the value of the angle α exceeding at least the half of the optical angle of the optical recording device (**From Fig. 4 of current invention, the half of the optical angle of the optical recording means is about 10 degree. Bock discloses the rotating angle θ can exceed 10 degree in the book binding area**).

Regarding claim 18 (depends on claim 15), Alderton discloses the method further comprising using a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 19 (depends on claim 15), Alderton discloses the method further comprising using a surface mirror (M) (**#14 mirror in Figure**).

Regarding claim 20 (depends on claim 1), Alderton discloses the method further comprising using a wedge shaped optical unit composed of a pressing-down glass plate (G) and a surface mirror (M) (**#14 mirror and the glass prism #12 in Figure**).

5. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alderton in view of Bock, and in further view of Wu et al. (US Patent 5,847,846), hereinafter referred as Wu.

Art Unit: 2625

Regarding claim 8 (depends on claim 1), Bock discloses that the mirror can be tilted (**col. 3, lines 31 – 35**).

However, Alderton in view of Bock fails to explicitly disclose the method further comprising scanning both pages of the opened book (B) used as the target (T) consecutively by a mirror (M) embedded into the wedge-shaped element, but without removing the wedge-shaped element from between the glass plates (G) constituting its boundaries.

However, in a similar field of endeavor Wu discloses a method for copying bound books. In addition, Wu discloses the method scanning both pages of the opened book used as the target consecutively by a mirror (M) embedded into the wedge-shaped element (**Fig. 3, #14**), but without removing the wedge-shaped element from between the glass plates (G) constituting its boundaries (**col. 3, lines 27 - 48**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton in view of Bock, and scanning both pages of the opened book used as the target consecutively by a mirror embedded into the wedge-shaped element, but without removing the wedge-shaped element from between the glass plates constituting its boundaries, as taught by Wu. The motivation for doing this is to sequentially record opposing pages of bound document positioned thereon using a single image station, as discussed by Wu (**in abstract**).

Regarding claim 10 (depends on claim 9), Alderton in view of Bock fails to explicitly

Art Unit: 2625

disclose the method further comprising applying a light source (L) assembled of several discrete light sources.

However, in a similar field of endeavor Wu discloses a method for copying bound books. In addition, Wu discloses the method characterized by applying a light source (L) assembled of several discrete light sources (**Fig. 1, #23 and #25**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton in view of Bock, and applying a light source (L) assembled of several discrete light sources, as taught by Wu. The motivation for doing this is that the both sides of book pages can be properly illuminated and calibrated, as disclosed by Wu (**col. 6, lines 37 – 41**).

Response to Arguments

6. Applicant's arguments with respect to claims 1 – 14 have been considered.

Regarding claim 1, the applicant alleges: "ALDERTON sets forth a device for photographically copying book pages. It can be seen in the sole Figure, which is reproduced below, that a light source is arranged under the prism beside the lower mirror serving via the prism - and optionally through a diffuser - for illumination of the page of the book to be scanned. In ALDERTON, the image of the book is directed to the recorder directly, without turning any element.

The arrangement of ALDERTON, without turning, could produce harmful reflections, and ALDERTON does not in the least deal with this problem. ALDERTON thus neither

Art Unit: 2625

discloses nor infers any solution to the elimination of such reflections and ghost images.

The Official Action acknowledged that ALDERTON fails to disclose the feature discussed above, but the Official Action then turns to BOCK and asserts that BOCK teaches turning away of the optical recording means at a predetermined angle and half of this angle, resp. in a curved course.

As can be seen, BOCK relates fundamentally to a photocopier, specifically to an apparatus serving for copying both paper sheets and books, rather one page of a book simultaneously. The disclosure of BOCK also exactly shows the actual operational arrangement of the two main scanning units owing to their shapes and dimensions. In this connection it is notable that in order to move the scanning carriage foamed from a light source and a scanning mirror as well as the movable mirror carriage for deflecting the image scanned by the scanning mirror in a range sufficient for scanning the whole surface of the document to be scanned, both movable carriages shall be moved beyond the edge of the page, otherwise the edge area of the page remains un-scanned.”

ALDERTON sets forth a device for photographically copying book pages. A light source is arranged under the prism beside the lower mirror serving via the prism - and optionally through a diffuser - for illumination of the page of the book to be scanned. In ALDERTON, the image of the book is directed to the recorder directly, without turning any element.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of ALDERTON, turning away the

Art Unit: 2625

means for recording optics and the optical unit an angle to make some part of the book more illuminated. This can be in viewed by BOCK.

The motivation for citing BOCK by the Examiner is not related whether it is a scanner, but rely on the fact that the means for recording optics and the optical unit can turn away an angle to make some part of the book more illuminated.

The Applicant further alleges: "On the other hand, in conventional photocopiers - having a copying direction from the right to the left - this can be realized without any problems, as there is enough free space beside the glass plate supporting the page of book to be copied.

However, BOCK is a case where not a flat sheet of paper but pages of a book are to be scanned, then instead of opening the book in an angle of 180° and laying and pressing it down to the glass plate, accompanied by the known disadvantages, the edge region of the copier apparatus is be equipped with a downwardly sloping shelf (element 34 of Figure 3) where the sloping angle shown in the drawing figure is at an angle of 45° , AND the scanning process shall be carried out from the left to the right (otherwise, the carriage 40 would impact into the downwardly sloping shelf). As there is almost unlimited free space at the right side of the book to be scanned, both carriages 40 and 48 have sufficient free space to move and stay there.

It can be seen from the description of BOCK that the apparatus has unambiguously been designed for only partly opening of the book, in that manner that the spine of the book lies in the region of the sloping shelf. This, however, causes especially for bulky

Art Unit: 2625

volumes that the page of the book does not completely thrust itself against the glass plate (especially at the spine region) so that the scanned image of the page will be distorted.

As a further disadvantage, the region of the page lying at a distance from the glass plate becomes less illuminated than the region pressed onto the glass plate - and the dedicated object of the solution disclosed in Bock was to eliminate this drawback, see col. 3, lines 26 to 35 of BOCK, mentioning the rotation through a small angle.

It should be emphasized that BOCK does not mention any reflections, shadows, ghost images as well as the elimination of such phenomena. On the contrary, BOCK is engaged only with the uniform illumination of the whole page of the book, both its spine-region and its remaining region, and it is proposed that for stronger illumination of the region beside the spine of the book the scanning mirror has to be tilted through a small angle. In order to keep the optical path operational, other mechanical parts of the photocopier must be tilted in an appropriate manner.

BOCK thus fails to address the deficiencies of ALDERTON.

Also, BOCK does not contain any teaching, disclosure or thought urging a person skilled in the art that:

- 1) to eliminate the formation of reflections and ghost images arising in scanning processes with known book scanners, and
- 2) how this eliminating shall/should be put into practice."

ALDERTON addressed, in a same field of endeavor of application, a device for

Art Unit: 2625

photographically copying book pages. ALDERTON disclosed the limitation of claim 1 except turning the means for recording optics and the optical unit.

This feature can be in viewed by BOCK.

The motivation for citing BOCK by the Examiner is not related whatever BOCK's application for, but only the feature that the recording optical device and the optical unit can turn away an angle to make some part of the book more illuminated for recording.

Therefore, ALDERTON in view of BOCK reads on the claimed limitation of claim 1 (similar as claims 11 and 15).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2625

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QIAN YANG whose telephone number is (571)270-7239. The examiner can normally be reached on Monday-Friday 8:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on 5712727490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QIAN YANG/
Examiner, Art Unit 2625

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